

Name \_\_\_\_\_  
Predicting Reaction Products – Will Reactions Happen?

**Single Replacement Reactions:** Use the activity series to determine if the following reactions will take place. If the reactants are given as words, write the formulas. If there is a reaction, predict the products and balance the equation. If there is no reaction, write NR or No Reaction.

1.  $\text{Al} + \text{FeCl}_3 \rightarrow$
2.  $\text{CdS} + \text{Sn} \rightarrow$
3. Magnesium metal and Zinc chlorite
4.  $\text{Hg}(\text{NO}_2)_2 + \text{Ag} \rightarrow$
5.  $\text{Pb} + \text{HClO}_4 \rightarrow$
6. Lithium metal and water
7. Platinum and oxygen gas
8. Zinc and water
9. Calcium chloride and iodine
10. Stannic bromide and fluorine

**Double Replacement Reactions:** Use the solubility table to determine if the following reactions will take place. If the reactants are given as words, write the formulas. If there is a reaction, predict the products and balance the equation. If there is no reaction, write NR or No Reaction.

11.  $\text{Ag}(\text{NO}_3)_3 + \text{KCl} \rightarrow$
12.  $\text{Al}_2(\text{SO}_4)_3 + (\text{NH}_4)_2\text{S} \rightarrow$
13.  $\text{NaOH} + \text{BaBr}_2 \rightarrow$
14. magnesium chlorate + barium oxide  $\rightarrow$
15. stannous chloride + hydrosulfuric acid  $\rightarrow$
16. zinc acetate + sodium phosphate  $\rightarrow$
17. calcium nitrate + iron (III) chloride  $\rightarrow$
18. copper (II) nitrate + sodium hydroxide  $\rightarrow$
19. aluminum chlorate + calcium iodide  $\rightarrow$
20. ammonium iodide + mercury (II) nitrate  $\rightarrow$